

REMARKS

Summary of the Office Action

Claim 7 stands rejected under 35 U.S.C. § 102(e) as being anticipated by Oh et al. (US 6,812,985).

Applicants' claim for foreign priority under 35 U.S.C. § 119(a)-(d) has been acknowledged.

Applicants wish to thank the Examiner for the indication that claim 8 is allowable.

Summary of the Response to the Office Action

Applicant has amended claim 7 to further define the invention, amended 8 to correct a minor informality unrelated to patentability, and added new claims 9-11. Accordingly, claims 7-11 are pending for consideration, with claim 8 having been allowed.

Claim for Foreign Priority

Applicants respectfully submit, contrary to the indication provided on page 2 of the Office Action, that the certified copy of the priority document was received in the parent Application No. 09/919,614 that was filed on August 2, 2000, and not received in the present Divisional application. Applicants respectfully request confirmation of this in the next Communication issued by the Office.

All Claims Define Allowable Subject Matter

Claim 7 stands rejected under 35 U.S.C. § 102(e) as being anticipated by Oh et al. (US 6,812,985). Applicants respectfully traverse this rejection for at least the following reasons.

Initially, Applicants respectfully submit that Oh et al. is directed to an in-plane switching mode LCD device, wherein the data electrode 121 and the common electrode 122 are both formed on a TFT array substrate 101 to induce an electric field to the liquid crystal layer 119.

Accordingly, Oh et al. discloses that the TFT array substrate 101 is disposed to face a color filter

substrate 102 having a black matrix 108 formed thereon. Thus, according to Oh et al., both of the data and common electrodes 121 and 122 are formed on the TFT array substrate 101, wherein the color filter substrate 102 (having the black matrix 108) does not include any electrically conductive electrodes. In addition, as shown in FIG. 5 of Oh et al., and as replicated on page 5 of the Office Action, the dotted lines denote lateral boundaries of the black matrix 108, thereby defining apertures for light to pass through. Accordingly, the dotted lines on FIG. 5 of Oh et al. do *not* present Applicants' claimed "stitch" lines, as recited by both of claims 7 and 8.

According to the Office Action, "[i]t is believed by the examiner that the present common electrode (item 122) and data electrode (item 121) used in the prior art serve for the same functionality; to supply an electric field over the pixel area." Applicants respectfully assert that the Office Action's attempt to form some analogous reasoning on functionality between the electric field forming electrodes of the in-plane switching LCD device of Oh et al. and Applicants' claimed common and pixel electrodes is inapposite. Moreover, since Applicants specifically recite relative locations of the common and pixel electrodes on opposing substrates, attempting to establish an analogous relationship between the function of the in-plane switching mode LCD device of Oh et al. and the liquid crystal display device, as recited by both claims 7 and 8, fails to focus upon the patentably distinct features of Applicants' claimed invention.

Applicants respectfully assert that the Office Action is grossly incorrect with the analogy that the data and common electrodes 121 and 122 in FIGs. 5-11 of Oh et al. are somehow "functionally equivalent" to the pixel electrode recited by claims 7 and 8. Applicants respectfully assert that the in-plane switching mode LCD device of Oh et al. functions completely differently from Applicants' disclosed and claimed liquid crystal display device. For example, according to Oh et al. (col. 4, lines 57-61) and as well known in the liquid crystal display art, alignment of liquid crystal molecules in the liquid crystal layer 119 is accomplished

by application of electrical signals to the data and common electrodes 121 and 122 disposed on the TFT array substrate 101 of Oh et al. Accordingly, neither the data electrode 121 nor the common electrode 122 of Oh et al. may be considered to be a “pixel electrode,” as use of the term “pixel electrode” is commonly used within the liquid crystal display art. In contrast, according to Applicants’ disclosed and claimed invention and as shown in FIG. 12B, for example, alignment of liquid crystal molecules in the liquid crystal layer 220 is accomplished by application of electrical signals to the pixel electrode 181 disposed on the array substrate 110 and the common electrode 210 disposed on the color filter substrate 200.

Moreover, since both the data and common electrodes 121 and 122 of Oh et al. are disposed on a single TFT array substrate 101, the electric field induced to the liquid crystal layer 119 causes planar alignment of the liquid crystal molecules with respect to the TFT array and color filter substrates 101 and 102 of Oh et al. In further contrast, according to Applicants’ disclosed and claimed invention, the liquid crystal molecules may be aligned perpendicular to the TFT array and color filter substrates 110 and 200 when an electric field is induced to the liquid crystal layer 220 by application of electric signals to the pixel electrode 181 disposed on the array substrate 110 and the common electrode 210 disposed on the color filter substrate 200.

Thus, according to the above reasons, Applicants respectfully submit that the Office Action allegation that “the present common electrode (item 122) and data electrode (item 121) used in the prior art serve for the same functionality; to supply an electric field over the pixel area” is incorrect and does not fully appreciate the patentably distinct features of Applicants’ disclosed and claimed invention.

Independent claim 7, as amended, recites a liquid crystal display device including, in part, a stitch line “corresponding to a boundary line defined by different exposures during a step-and-repeat process for forming the passivation layer. In contrast to Applicants’ claimed

invention, as explained above, Oh et al. is directed to an in-plane switching mode LCD device, wherein the two electrodes used to induce an electric field to the liquid crystal layer, i.e., data and common electrodes, are formed on a common TFT array substrate. Accordingly, Applicants respectfully assert that Oh et al. fails to teach or suggest a stitch line corresponding to a boundary line of the passivation layer.

For at least the above reasons, Applicants respectfully assert that the rejection under 35 U.S.C. § 102(e) should be withdrawn because Oh et al. neither teaches nor suggests the novel combination of features clearly recited in amended independent claim 7.

New Claims

Applicants have added new claims 9-11 to further define the invention. Applicants respectfully submit that new claims 9-11 are allowable for at least their dependency upon claims 7 and 8, as well as the individual features each of new claims 9-11 recite.

CONCLUSION

In view of the foregoing, Applicants respectfully request reconsideration and the timely allowance of the pending claims. Should the Examiner feel that there are any issues outstanding after consideration of the response, the Examiner is invited to contact the Applicants' undersigned representative to expedite prosecution.

If there are any other fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-0310. If a fee is required for an extension of time under 37 C.F.R. § 1.136 not accounted for above, such an extension is requested and the fee should also be charged to our Deposit Account.

Respectfully submitted,

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